

U.S. Patent Application Serial No. 09/768,178
Response dated February 23, 2004
Reply to OA of February 17, 2004

IN THE CLAIMS

Please add new claims 10-29 as follows:

Claims 1-4 (Canceled).

Claim 5 (Previously Presented): An ultraviolet-curable composition used for a protective film in an optical recording medium having

- (a) a recording layer or data recording pits,
- (b) a reflective film comprised of Ag or an alloy having Ag as its main component, and
- (c) a protective film comprised of a cured film of the ultraviolet-curable composition, deposited in that order, on a substrate,

wherein the pH value of a 1 wt% methanol solution of the ultraviolet-curable composition is within the range of 4.5 to 6.8.

Claims 6-9 (Canceled).

Claim 10 (Previously Presented): An ultraviolet-curable composition used for a protective film in an optical recording medium, comprising: a polymerizable composition comprising at least one of a monomer and an oligomer having a carboxyl group, wherein said polymerizable composition is capable of being cured using ultraviolet radiation and is composed such that a pH of

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a 1.0 wt% methanol solution of said polymerizable composition is within the range of 4.5 to 6.8.

Claim 11 (Previously Presented): An ultraviolet-curable composition used for a protective film in an optical recording medium, said ultraviolet curable composition comprising:

a polymerizable composition comprising at least one of a monomer and an oligomer having a carboxyl group, present in an amount sufficient such that a pH of a 1.0 wt% methanol solution of said polymerizable composition is within the range of 4.5 to 6.8, and

an optical recording medium, comprising:

(a) a recording layer or data recording pits, and

(b) a reflective film comprising Ag or an alloy having Ag as its main component provided on said recording layer,

wherein said polymerizable composition is provided on said reflective film to form said protective film upon curing.

Claim 12 (Previously Presented): An ultraviolet-curable composition used for a protective film in an optical recording medium, said ultraviolet-curable composition comprising:

at least one of a monomer and an oligomer having a carboxyl group, present in an amount sufficient such that a pH of a 1.0 wt.% methanol solution of said ultraviolet-curable composition is within the range of 4.5 to 6.8, and

said optical recording medium comprising:

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(a) a recording layer or data recording pits,
(b) a reflective film comprising Ag or an alloy having Ag as its main component, and
(c) a protective film comprising a cured film of said ultraviolet-curable composition,
deposited in that order, on a substrate.

Claim 13 (Previously Presented): The ultraviolet-curable composition according to any one of claims 10, 11 or 12, wherein said at least one of a monomer and an oligomer having a carboxyl group, is present at a concentration within the range of 0.05 to 1 wt%.

Claim 14 (Previously Presented): An optical recording medium, comprising: a protective film comprising a cured film of an ultraviolet-curable composition, said ultraviolet-curable composition comprising at least one of a monomer and an oligomer having a carboxyl group, present in an amount sufficient such that a pH of a 1.0 wt% methanol solution of said ultraviolet-curable composition is within the range of 4.5 to 6.8.

Claim 15 (Previously Presented): An optical recording medium, comprising: a protective film comprising a cured film of an ultraviolet-curable composition, said ultraviolet-curable composition comprising a polymerizable composition capable of being cured using ultraviolet radiation and composed such that a pH of a 1 wt% methanol solution of said polymerizable composition is within the range of 4.5 to 6.8.

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Claim 16 (Previously Presented): The optical recording medium of any one of claims 14 or 15, further comprising:

a recording layer or data recording pits, provided on a substrate, and
a reflective film comprising Ag or an alloy having Ag as its main component, provided on said recording layer, and
wherein said protective film is provided on and is in communication with, said reflective film, to form said optical recording medium.

Claim 17 (Previously Presented): The ultraviolet-curable composition of any one of claims 10 or 11, said polymerizable composition consists essentially of a solution of said polymerizable composition.

Claim 18 (Previously Presented): The ultraviolet-curable composition of claim 12, said ultraviolet-curable composition consists essentially of a solution of said ultraviolet-curable composition.

Claim 19 (Previously Presented): The optical recording medium, according to any one of claims 14 or 15, said ultraviolet-curable composition consists essentially of a solution comprising at least one of a monomer and an oligomer having a carboxyl group, present in an amount sufficient

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such that a pH of a 1.0 wt% methanol solution of said ultraviolet-curable composition, is within the range of 4.5 to 6.8.

Claim 20 (Previously Presented): The ultraviolet-curable composition of claim 13, further comprising a second monomer comprising one or more members selected from the group consisting of: a third monomer having 2 or more (meth)acryloyl groups in its molecule which increases the strength of a cured film of the composition, and a fourth monomer having 2 or less (meth)acryloyl groups in its molecule which lowers the viscosity of the composition.

Claim 21 (Previously Presented): The ultraviolet-curable composition of claim 20, said third monomer comprises 3 or more (meth)acryloyl groups in its molecule.

Claim 22 (Previously Presented): The ultraviolet-curable composition of claim 20, further comprising a second oligomer comprising one or more members selected from the group consisting of: epoxy acrylate, polyurethane acrylate, polyester acrylate and polyether acrylate.

Claim 23 (Previously Presented): The ultraviolet-curable composition of claim 13, further comprising one or more members selected from the group consisting of: a photopolymerization initiator, a photopolymerization sensitizer, a polymerization inhibitor, and a surfactant.

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Claim 24 (Previously Presented): The optical recording medium of claim 16, further comprising a label printing layer, provided on said protective film.

Claim 25 (Previously Presented): The optical recording medium of any one of claims 14 or 15, said protective film has a thickness in the range of from 4 to 15 μm .

Claim 26 (Previously Presented): The ultraviolet-curable composition of claim 21, wherein said oligomer having a carboxyl group, said second oligomer and said third monomer are present in a combined amount of from 50 wt% to 90 wt%, and said fourth monomer is present in an amount of from 5 wt% to 40 wt%.

Claim 27 (Previously Presented): The ultraviolet-curable composition of claim 13, said oligomer comprising one or more members selected from the group consisting of: an epoxy acrylate having a carboxyl group in its molecule, a polyurethane acrylate having a carboxyl group in its molecule, a polyester acrylate having a carboxyl group in its molecule, and a polyether acrylate having a carboxyl group in its molecule.

Claim 28 (Previously Presented): The ultraviolet-curable composition of claim 13, said monomer comprising one or more members selected from the group consisting of (meth)acrylic acid,

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(meth)acrylic dimer acid, 2-(meth)acryloyloxyethylphthalic acid, 2-(meth) acryloyloxy propylphthalic acid, and 2-(meth)acryloyloxyethylsuccinic acid.

Claim 29 (Previously Presented): An optical recording medium, comprising:

a substrate;

a recording layer or data recording pits provided on said substrate;

a reflective film comprising Ag, or an alloy of Ag having Ag as its main component, said reflective film provided on said recording layer; and

a protective film comprising a cured film of an ultraviolet-curable composition provided on said reflective film, to produce said optical recording medium,

wherein said ultraviolet-curable composition is composed such that a pH of a 1.0 wt% methanol solution of said ultraviolet-curable composition is within the range of 4.5 to 6.8.